



**WAYNE STATE UNIVERSITY  
COLLEGE OF ENGINEERING**

**Course Equivalencies for Monroe County Community College**

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**Bachelors of Science degree requirements for the following Majors:**

- Chemical Engineering (CHE)
- Civil Engineering (CE)
- Electrical and Computer Engineering (ECE)
- Industrial and Manufacturing Engineering (IE)
- Mechanical Engineering (ME)

| Wayne State University                        |                            |          | Monroe                  |     | Degree Requirements |    |     |    |    |
|---|----------------------------|----------|-------------------------|-----|---------------------|----|-----|----|----|
| Title   | WSU Course                 | Cr.      | Course                  | Cr. | CHE                 | CE | ECE | IE | ME |
| Calculus I (MC)                               | MAT 2010                   | 4        | MATH 171                | 4   | X                   | X  | X   | X  | X  |
| Calculus II                                   | MAT 2020                   | 4        | MATH 172                | 4   | X                   | X  | X   | X  | X  |
| Calculus III                                  | MAT 2030                   | 4        | MATH 271                | 4   | X                   | X  | X   | X  | X  |
| Linear Algebra and Differential Equations     | MAT 2150<br>(or 2250+2350) | 4<br>(6) | MATH<br>251 + 273       | 6   | X                   | X  | X   | X  | X  |
| General Physics I (PS)                        | PHY 2175                   | 4        | PHY 251                 | 5   | X                   | X  |     | X  | X  |
| General Physics II                            | PHY 2185                   | 4        | PHY 252                 | 5   | X                   | X  | X   | X  | X  |
| General Physics I + Lab (PS)                  | PHY 2175/2171              | 5        | PHY 251                 | 5   |                     |    | X   |    |    |
| Principles of Chemistry I (PS)                | CHM<br>1225/1230           | 4        | CHEM 151                | 4   | X                   | X  | X   | X  | X  |
| Organic Chemistry I                           | CHM<br>1240/1250           | 5        | CHEM 251                | 4   | X                   |    |     |    |    |
| Organic Chemistry II                          | CHM 2225                   | 3        | No equivalent           |     | X                   |    |     |    |    |
| Basic Biology I (LS)                          | BIO 1510                   | 3        | BIOL 151                | 4   | X                   | X  | X   | X  | X  |
| Microeconomics (SS) or<br>Macroeconomics (SS) | ECO 2010 or<br>ECO 2020    | 3        | ECON 252 or<br>ECON 251 | 3   | X                   | X  | X   | X* | X  |
| Intro. College Writing (BC)                   | ENG 1020                   | 3        | ENGL 151                | 3   | X                   | X  | X   | X  | X  |

Applicants to the College of Engineering who have completed college-level studies at a community college or 4-year university are evaluated based on G.P.A. and the level of curriculum completion at the previous institution(s). Students may be admitted to the Professional Engineering program, the Pre-professional Program, or the Engineering Bridge program, depending on their educational background and placement examination results.

*\*The Social Science requirement for Industrial Engineering can be fulfilled by any course*

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**General Education Requirements**

Unless otherwise indicated with a plus (“+”) sign, please select one course from those listed to fulfill each Wayne State University General Education Requirement. Please be advised that no more than 64 credits from a two-year degree-granting institution will apply toward the completing of Wayne State University degree requirements, though all credits that transfer will be listed on the Wayne State University student record.

| Wayne State University Requirement      | Monroe Courses  |
|---|---|
| AI - American Society and Institutions* | POLSC 151(3)  |
| BC - Basic Composition                  | Fulfilled by degree requirements in previous table  |
| CT - Critical Thinking*                 | PHIL 151(3) or WSU competency exam  |
| FC - Foreign Culture*                   | FREN 251(4)<br>GERMN 251 (4)<br>HIST 255 (3)<br>SPAN 251(4)<br>(additional single course options available at WSU)  |
| HS - Historical Studies*                | HIST 151(3), 152(3)   |
| IC - Intermediate Composition           | ENG 3050 at WSU required  |
| LS - Life Science                       | Fulfilled by degree requirements in previous table  |
| MC - Mathematics Competency             | Effective Fall 2016, the Math Competency Requirement has been temporarily suspended for all undergraduate students. |
| OC - Oral Competency                    | ENG 3060 at WSU required  |
| PL - Philosophy and Letters             | PHI 1120 at WSU required  |
| PS - Physical Science                   | Fulfilled by degree requirements in previous table  |
| SS - Social Science                     | Fulfilled by degree requirements in previous table  |
| VP - Visual and Performing Arts*        | ART 155(3), 280(3), 281(3), 282(3)<br>HUMAN 151(3)<br>THEA 151(3)   |
| WI - Writing Intensive                  | Must be fulfilled at WSU  |

**Note:** Students are strongly advised to take one mathematics course each semester until the entire required math sequence is complete.

**\*Waived for students with MACRAO stamped transcript or endorsed as “MTA satisfied.” To read more about the MACRAO General Education Transfer Agreement or the MTA, please visit the links below or speak with a community college counselor.**

[MACRAO General Education Transfer Agreement](#)  
[Michigan Transfer Agreement \(MTA\)](#)